Delete the paragraph at page 7, lines 25-27 as follows:

~~Figures 2A-2D are photomicrographs of a foamed metal substrate having an anchor layer electric arc sprayed thereon, at magnifications of 38x, 55x, 153x and 434x, respectively;~~

Replace the paragraph at page 7, lines 28-30 with the following:

Figures ~~2E~~2A-~~2G~~ 2C are photomicrographs of a cross section of a flat metal substrate and an anchor layer electric arc sprayed thereon, at magnifications of 500x, 1.51kx and 2.98kx~~.~~;

Replace the paragraph at page 7, line 31 with the following:

Figure ~~2H~~ 2D is an elevation view of a perforated, tubular metal substrate;

Replace the paragraph at page 8, lines 1-2 with the following:

Figure ~~2I~~ 2E is an elevation view of a catalyst member in accordance with the present invention comprising the substrate of Figure ~~2H~~2D;

Replace the paragraph at page 7, lines 3-4 with the following:

Figure ~~2J~~ 2F is a schematic view of a wire mesh substrate having an anchor layer sprayed thereon in accordance with the present invention;

Replace the paragraph at page 16, lines 4-26 with the following:

To illustrate the dramatic difference in the surface of an anchor layer applied in accordance with the present invention as compared to the surface of a metal substrate without the anchor layer~~, reference is made herein to Figures 1A through 1D and, for comparison thereto, Figures 2A through 2D~~. Figures 1A through 1D are photomicrographs of a foamed metal substrate, taken at a variety of magnification levels. These Figures show that the substrate has a three-dimensional web-like structure having smooth surfaces. ~~By comparison, Figures 2A~~

~~through 2D are photomicrographs of a foamed metal substrate taken at corresponding magnification levels after an anchor layer has been electric arc sprayed thereon.~~ A visual comparison of Figures 1A through 1D and ~~the corresponding Figures 2A through 2D illustrates~~ ~~the~~a roughened surface that results from electric arc spraying an anchor layer onto a substrate ~~as~~ is taught herein. Figures ~~2E~~2A, ~~2F~~ 2B and ~~2G~~ 2C show sections of a high temperature steel plate substrate 100 and a nickel aluminide anchor layer 110 electric arc sprayed thereon, at magnifications of 500x, 1.51kx and 2.98kx, respectively. As is evident from these Figures, the anchor layer 110 provides a highly irregular surface on the substrate 100. Accordingly, the anchor layer 110 effectively increases the surface area on which catalytic material may be deposited on the carrier relative to a non-sprayed substrate and it provides structural features such as crevices, nooks, etc., that help prevent spalling of catalytic material from the anchor layer. Figures ~~2E~~ 2A through ~~2G~~ 2C illustrate that the relatively low temperature of the electric arc spray process deposits the metal feedstock for the anchor layer on the substrate at a temperature that permits the feedstock to freeze when it impinges upon the substrate rather than remaining molten and flowing into a smoother configuration.

Replace the paragraph at page 17, lines 6-22 with the following:

In another example of the practice of the present invention, a perforated stainless steel tube substrate as shown in Figure ~~2H~~ 2D was electric arc sprayed with a nickel aluminide feedstock to deposit an anchor layer thereon; a catalytic material can then be deposited on the anchor layer. A sample of a resulting catalyst member is shown in Figure ~~2I~~2E. The anchor layer will provide superior adhesion of a catalytic material to the carrier when it is used to prepare a catalyst member in accordance with the present invention. A catalyst member so configured is suitable for use in an exhaust treatment apparatus to serve, for example, as a substitute for commercially

available tubular catalyst members that may be installed in the exhaust stream, e.g., inside a section of the exhaust piping. The tubular catalyst member may optionally be installed at a point upstream from a conventional catalytic converter. In an alternative embodiment, the interior of a non-perforated tubular substrate may be wire arc sprayed and coated with catalytic material. The resulting interiorly-coated tubular catalyst member can be used in place of a conventional, non-catalyzed tubular portion of the prior art exhaust gas treatment apparatus of an engine, e.g., as a length of exhaust pipe. Optionally, a flow-through catalyst member may be mounted within the tubular catalyst member.

Replace the paragraph at page 7, line 23 to page 8, line 19 with the following:

The strong bond of an anchor layer achieved by electric arc spraying permits the resulting substrates to be mechanically processed in various ways that reshape the substrate but that do not diminish the mass of the substrate, i.e., they do not involve cutting, grinding or other removal of substrate material. For example, pliable (i.e., malleable and/or flexible) anchor layer-coated substrates may be bent, compressed, folded, rolled, woven, etc., after the anchor layer is deposited thereon, in addition to or instead of being cut, ground, etc. As used herein and in the claims, the term "reshape" is meant to encompass all such processes that deform the substrate but do not reduce its mass by cutting, grinding, etc. Thus, a wire arc-sprayed foil substrate can be reshaped by being corrugated and rolled with a flat foil to provide a corrugated foil honeycomb. A wire can be reshaped by being sprayed and then woven with other wires to compose a mesh that is used as a carrier for a catalytic material. Similarly, a flat wire mesh substrate can be wire arc sprayed in accordance with this invention can then be reshaped by being curled into a cylindrical configuration, as seen in Figure ~~2J~~2F, or may be reshaped into a corrugated sheet that may optionally be combined with other substrates to compose a carrier, or that may be used on its own. Likewise,

foamed metal having an anchor layer thereon may be reshaped by being compressed to change its shape and/or density as discussed herein. Such reshaping may occur before or even after catalytic material is deposited on the foamed metal substrate. The present invention permits the manufacture of carriers and/or catalyst members that can easily be molded to fit within a portion of an exhaust gas treatment apparatus that serves as a container for the catalyst member, e.g., in a canister specifically designed to house a catalyst member, or in another portion of the apparatus, e.g., an exhaust manifold, exhaust flow pipe, a high mass transfer area conduit, etc. For example, a flat, catalyzed wire mesh patch prepared in accordance with the spraying and coating methods described herein may be reshaped for installation in an exhaust pipe by being rolled into a coiled configuration. Optionally, the substrate may be resilient and may, upon insertion into a containing structure, be allowed to unwind or otherwise relax from the reshaping force to the extent that it bears against the interior surface of the containing structure, thus conforming to the structure.

IN THE DRAWINGS:

Replace the three drawing sheets containing Figures 2E through 2G with presently submitted three informal drawing sheets containing Figures 2A through 2C.